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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,437	04/11/2006	Dirk Burdinski	GB03 0186 US1	1847
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EXAMINER				
BANH, DAVID H				
ART UNIT		PAPER NUMBER		
2854				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/575,437

**Applicant(s)**

BURDINSKI ET AL.

**Examiner**

DAVID BANH

**Art Unit**

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: It is believed that commas are missing in portions of claim 1, particularly after the recitation "the bulk surface" in line 4, and "the bulk surface" in line 6. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams et al. (US PG Pub 2005/0120902) and Glasmästar et al. (see provided NPL documents, Langmuir 2003, 19, 5475-5483).

Adams et al. teaches a method of patterning a surface of a substrate **18**, the method comprising the acts of providing an elastomeric stamp **10** having a bulk surface **11** and at least one feature protruding **16** from the bulk surface, the protruding feature **16** having a contact surface **14** and an edge **19** extending from the contact surface **14** extending from the bulk surface **11**. Adams et al. teaches the act of supply a solution of the ink and a solvent to the barrier layer (page 2, paragraph 25), removing the solvent

from the barrier layer (page 3, paragraph 25, blow drying). Adam et al. teaches providing substrate and contacting the surface of the protruding feature with the surface of the substrate (page 1, paragraph 8) to transfer ink from the edge of the protruding features to the surface of the substrate (see Figure 1A).

Adams et al. differs from the claimed invention in that it does not teach the provision of a first substrate, where the stamp is brought in contact with the first substrate and ink is transferred from the contact surface of the protruding feature to the surface of the first substrate. Adams et al. does not teach the provision of a barrier layer on the contact surface and bulk surface of the ink. Finally, Adams et al. does not teach that the substrate has a higher affinity for the ink than the barrier layer.

However, in printing, it is inherent that the substrate has a higher affinity to ink than the printing apparatus, as ink must be transferred from the printing apparatus to the substrate.

The method of stamping taught by Adam et al. teaches a way of removing ink from the contact surface of the protruding feature. It would thus have been obvious to one of ordinary skill in the art at the time the invention was made to use this method of stamping as a way of wiping ink from the contact surface of the protruding feature for the purpose of producing cleaner second prints.

Finally, Adams et al. still does not the provision of a barrier layer. However, Glasmästar et al. teaches in the conclusion (pages 5482-5843, conclusion) that the control of the surface layer of the stamp is necessary to improve the transfer of ink from the stamp to the substrate. Thus, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to control the affinity of the stamp surface and the contact surface to ink by keeping it low, thus producing a barrier layer for the purpose of increasing the transfer of ink from the stamp to the substrate.

For claim 4: It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second substrate for a period of time necessary for transfer of ink from edge of the protrusions of the stamp to the surface of the second substrate for the purpose of producing the desired patterns. One of ordinary skill in the art at the time the invention was made would recognize the need to allow time for the ink to be transferred from stamp to substrate.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams et al. (US PG Pub 2005/0120902) and Glasmästar et al. (see provided NPL documents, Langmuir 2003, 19, 5475-5483) as applied to claim 1 above, and further in view of Cherniavskaya et al. (see provided NPL documents, Langmuir 2002, 18, 7029-7034).

The combination of Adams et al. and Glasmästar et al. teaches all of the limitations of claims 2 and 3 as found in claim 1 above. The combination does not teach that a part of the surface of the printed second substrate may be removed with an etching act. However, Cherniavskaya et al. teaches that the surfaces may be patterned by a self-assembled monolayer process, like the one taught by Adams et al. for the purpose of constituting etch resists (see Introduction, column 2, line 11). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove a part of the printed substrate by etching.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID BANH whose telephone number is (571)270-3851. The examiner can normally be reached on M-Th 9:30AM-8PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571)272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DHB  
October 23, 2008

/Daniel J. Colilla/  
Primary Examiner  
Art Unit 2854